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ABSTRACT

Findings of a study that examined the relationship among three variables of principal leadership--principal vision, environmental robustness, and teacher sense of autonomy--to school leadership are presented in this paper. Methodology involved an ex post facto analysis of a 1990 survey of 1,338 teachers in 34 Oregon public high schools. Interviews were also conducted with eight principals. Findings indicate that: (1) teachers' perceptions of their principals' effectiveness in advancing a school vision are positively correlated with their perceptions of a robust school climate; (2) a positive relationship exists between teachers' perceptions of their principals' effectiveness in advancing a school vision and their sense of autonomy; and (3) a significant positive relationship exists between teachers' sense of autonomy and their perceptions of a robust school climate. The initial purpose of the study was to view the principal's vision as the catalyst for leadership in the high school. However, robustness, which implies less routinization and monotony in the school structure, may play an essential role. Four tables are included. (Contains 58 references.) (LMI)

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PRINCIPAL VISION, ENVIRONMENTAL ROBUSTNESS, AND TEACHER SENSE OF AUTONOMY AT THE HIGH SCHOOL

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PRINCIPAL VISION, ENVIRONMENTAL ROBUSTNESS, AND TEACHER SENSE OF AUTONOMY AT THE HIGH SCHOOL

Dr. Daniel N. Johnson,

4/92

OBJECTIVE

This paper considers key elements of principal leadership and its correlates. It focuses on the relationships among three variables, principal vision, environmental robustness, and teacher sense of autonomy and their relationship with the principal's leadership role in school effectiveness. The primary source for this paper is a 1991 study of 34 large high schools in the state of Oregon which examined the relationships of these variables from the perspectives high school teachers (Johnson, 1991).

INTRODUCTION

Theory and research both point to the centrality of the principal's leadership role in school effectiveness. Yet, few studies of school leadership actually examine relationships among leadership variables. This study extends earlier work by Street (1988) and Licata, Greenfield, and Teddlie (1989) by building upon their examination of three leadership correlates: principal vision, environmental robustness, and teacher autonomy. The earlier study examined relationships among these variables at the elementary level; this study focuses on the high school level.

The current literature is full of references and descriptions of effective versus ineffective schools. The school effectiveness literature provides images of principals as strong leaders. It links leadership to school climate, teacher morale, and organizational performance (Blase, 1987). Many of the most influential researchers and writers on school effectiveness and educational leadership,

including Barth (1988b, 1990); Brookover & Lezotte (1979); Edmonds (1979); Rutter, Maughan, Mortimore, Ouston, and Smith (1979); and Sergiovanni (1984, 1987a) describe the leadership of the principal as the single most significant factor in creating effective schools. Blumberg and Greenfield (1986) describe the gravity of the principalship in very succinct terms: ". . . principals must bear the greatest responsibility for, and hold the greatest potential for, determining what sort of school a school is or is not to become . . . As the principal goes, so goes the school" (p. 228).

The principal is not, however, an independent actor in effective schools. The effectiveness of his or her leadership is based on a myriad of interrelated variables. This study was undertaken to gain a better theoretical understanding of the relationships of three such variables; principal vision, environmental robustness, and teacher sense of autonomy from the perspective of the teacher.

There were several other reasons for undertaking this study. The first was the focus at the high school. While there have been few studies of the three concepts at the elementary level, the relationship among these variables have not been examined at the high school level. In fact, most of the research on educational leadership and school effectiveness in general has been conducted in elementary schools. Because high schools are different enough in structure and culture from elementary schools, one must use great care in generalizing findings from studies at the elementary school level to high schools (Murphy, Hallinger, & Mitman, 1983). For example, it is much more difficult to create common goals and focus in high schools than in elementary schools because high schools have greater diversity of purpose and objectives, and greater organizational complexity due in part to size and departmentalization. The curricular and social divisions in high schools suggest more "loosely coupled"

organizations and more decentralized authority than in elementary schools (Firestone, Herriott, & Wilson, 1987).

High school teachers view their work differently than elementary teachers. They are more likely to see themselves as subject matter specialists rather than student centered. Lortie (1975), in his classic study School Teacher noted that high school teachers see the principal as somewhat remote. Departmentalization limits direct interventions by the principal. Elementary teachers, on the other hand, are more exposed to their principals. In considering the issue of teacher autonomy, Lortie (1975) found that high school teachers view authority, teacher autonomy and principal roles differently than elementary school teachers. High school teachers expect greater autonomy, "hands off" involvement, and less supervision from their principals than do elementary teachers.

A second reason for the study was to consider the importance of the role of the principal in defining a vision, sharing it with the staff, and receiving a positive level of support for and commitment to that vision.

A third reason for the study was to consider the relationships among these three variables, from the perspectives of the classroom teacher, in creating an effective school. The literature and research on effective schools do not explain how these variables may be connected. The propositions offered in this study could provide a theoretical basis for further study of the relationships among these variables and their possible effect on school achievement.

THEORETICAL FRAMEWORK

While research on principal effectiveness has increased dramatically in recent years, much of it has generated descriptions of what principals do. Some studies directed at school effectiveness have investigated organizational variables

such as leadership characteristics and correlated them with outcomes such as student achievement. Other studies have examined the impact of leadership with mediating variables such as school climate (Dwyer, Lee, Barnett, Filby, & Rowan, 1984). Little attention has been given to the relationship between leadership behaviors and school context variables. Very limited data exist describing meanings associated with principals' actions specifically from the teachers' perspective (Sergiovanni & Corbally, 1984). Furthermore, the research on educational leadership has certain methodological problems including the limited generalizability of findings. In the present study, the researcher sought to gain a clearer picture of the relationships among the vision of the principal, environmental robustness, and teachers' sense of autonomy. These variables do not stand alone but are imbedded in the leadership discussion. Principal vision is only as powerful a concept as the context in which it is shared (environmental robustness) and the receptivity and willingness to respond to it by followers (teacher sense of autonomy). The relationships among these variables are not, however, automatically complimentary. For example, when a principal works with a group of teachers to gain their acceptance and internalization of a vision for the school, he or she runs the risk of threatening teacher feelings about professional autonomy. The risk is enhanced particularly when a need to change classroom procedures is part of that vision. Yet Blumberg and Greenfield (1980, 1986) describe effective principals as those who effectively advance their vision and work collaboratively with staff while respecting their discretionary power and autonomy. It might be argued, then, that teachers associate principals who have vision with energy, creativity, and freedom to select the techniques of their work. Further, a case might be made that teachers who feel positive about their sense of professional autonomy also perceive a more meaningful, challenging, powerful, or robust school climate.

All three variables are considered in both the leadership and effective schools literature. Vision and autonomy appear to be more firmly grounded in the leadership literature. Environmental robustness, as a school climate variable, is more closely linked in the effective schools literature.

Principal Vision

The concept of vision is as rooted in antiquity as it is in contemporary dialogue. More than a thousand years before the birth of Christ, King Solomon prophesied: "Without a vision, the people will perish." From prophets to presidents, vision is on the lips of the people. President Bush talks of "that vision thing." In Warren Beatty's 1990 hit movie Dick Tracy, gangster Big Boy Caprice, when challenged why he should be the mob boss of the city responds: "Because I have a vision. A big boss must have a vision." From sacred to secular, ancient manuscript to American comic strip, faith to farce, the concept of vision is experiencing a new birth as an essential component of our leadership genre.

Of the many qualities attributed to effective instructional leaders perhaps none is more significant than the vision of the principal and his or her ability to translate that vision, communicate it to others, and have others support it. Two of the earliest educators to suggest the relevance of vision for school principals were Blumberg and Greenfield (1980) in their book The Effective Principal. They conclude, in their study of effective principals, that the extent to which a principal is successful in achieving his or her goals for the school is related to his or her commitment to a particular educational or organizational vision.

Sergiovanni (1984) maintains that the principal's key functions in effective schools are: creating a vision, establishing goal consensus among staff, and developing a sense of institutional identity. Blumberg and Greenfield (1986)

describe vision as "the foundation upon which the moral authority of the principal rests. It is what enables the principal to lead a school well" (p. 228).

Vision is operationally defined by Licata, Greenfield, and Teddlie (1989) as: "the capacity to see the discrepancy between how things are and how they might be and the need to compel others to act on these imagined possibilities" (p. 3). The School Vision Inventory (SVI) used in this study is based upon the principal's ability to persuade others to accept and share a vision, exchange ideas about the vision with others, and motivate others to act and even make sacrifices towards this vision (Greenfield, Licata, & Johnson, 1989, p. 2).

Environmental Robustness

A key element in the effective schools literature is the concept of school climate in relationship to outcome variables such as student achievement (Brookover, 1979; Edmonds, 1979; Levine & Lezotte, 1989; Little, 1982; Rossman, Corbett, & Firestone, 1988; and Rutter et al., 1979). In summarizing the literature on school climate and culture, Hoy and Miskel (1986) define climate as shared perceptions of behavior and culture as shared beliefs and assumptions in schools. Rutter et al. (1979) refer to the characteristics of a social organization as a school's ethos, or its overall tone, spirit, or organizational identity. Effective schools have a more positive ethos or climate.

Licata and Willower (1975) first described environmental robustness as a component of school climate when they examined conflict between student and teacher subcultures in school organizations. They viewed the student and teacher antagonists as actors in a plot that could potentially create high drama and evoke considerable empathy within both students and teachers. Environmental robustness as a theoretical construct was first defined as the perceived "dramatic" content of certain school structures for a particular audience; i.e., teachers,

students, parents, or administrators (Willower & Licata, 1975). Licata and Willower (1978) operationally defined the dramatic perceptions for robustness as "interesting, challenging, active, unusual, powerful, thrilling, important, fresh, meaningful, and action-packed" (p. 221).

In this study, teacher perceptions of the robustness of (a) their role as a teacher, (b) their principal, and (c) their school were considered to be significant correlates of principal vision and/or teacher autonomy. The Robustness Semantic Differential (RSD) was used to measure environmental robustness.

Licata and Johnson (1989) report correlations between the RSD and multiple measures of school environment and principal performance. They found that more robust school environments are those where teachers have positive sentiments about staff relationships, work load, educational effectiveness, and student evaluation practices. Furthermore, they have more effective supervisor relationships, time management, and principal effectiveness in curriculum and instruction and in articulating and implementing a vision of what the school ought to be.

Teacher Sense of Autonomy

Teacher autonomy is a third characteristic of effective schools. The literature is replete with references to this variable. On the one hand, the literature describes the isolation which accompanies autonomy in the classroom. On the other, there is a growing body of literature which details autonomy in terms of the importance given to individual teachers believing they have a sense of control over their work and their working conditions.

The conceptualization of autonomy for this project comes from the work of Charters (1974) on sense of teacher autonomy. Charters describes sense of autonomy as a psychological construct representing a teacher's beliefs about his

or her freedom from external interference, pressure, or control in performing the work of classroom instruction. Sense of work autonomy is operationally defined by Packard (1976) as the extent to which teachers view themselves as the legitimate classroom authorities and rightful holders of discretionary power over such matters as instructional processes, pupil control, motivation and evaluation.

Charters (1974) notes that public school teaching, unlike other occupations, has been regarded by some as providing a high degree of autonomy on a daily basis. He writes that others, however, see teachers as powerless pawns pursuing their daily activities, and are constrained by bureaucratic rules and guidelines which they had no involvement in making.

Autonomy refers to the individual's need to participate in making decisions that affect him or her, to exert influence in controlling the work situation, to have a voice in setting job-related goals, and to have authority to make decisions and latitude to work independently. Teachers' sense of work autonomy was measured by the Sense of Autonomy Scale [SAS].

STATEMENT OF THE PROBLEM

This study examined the collective perspective that high school teachers have about the principal's vision, the school's environmental robustness, and the work autonomy of teachers. The research problem, based at the secondary level, was expressed in the following question: What are the relationships among vision, environmental robustness, and teacher autonomy? The relationships among these three variables was hypothesized as follows:

1. There is a significant positive relationship between teachers' perceptions of their principal's effectiveness in advancing a school's vision and their perceptions of a robust school climate.

2. There is a significant positive relationship between teachers' perceptions of their principal's effectiveness in advancing a school's vision and their sense of autonomy.

3. There is a significant positive relationship between teachers' sense of autonomy and their perceptions of a robust school climate.

METHODS AND TECHNIQUES

A descriptive study examined the collective perspective that high school teachers have regarding these three variables. An ex post facto study of these variables and their correlates was performed. The school was the statistical unit of analysis. Data were statistically analyzed using the Pearson product moment correlation and ANOVA.

Data Source

In the fall of 1990, data were collected from 1338 high school teachers in 34 public high schools located in 23 school districts in Oregon. The schools surveyed were classified among the largest in the state of Oregon. All had a minimum student population of 600 students in grades 10-12. The participating high schools comprised 49.3% of all of the large (4A) public high schools in the state. The schools participating in the study had a combined student population of 43,213 and ranged in size from 845 to 1,725 students. The overall return rate for teachers from participating schools was 57.67%. Of the 34 schools sampled, 33 had a return rate large enough (34% - 90%) to be compute viable mean scores for the various instruments. The mean scores from each school were used as the units of analysis for most results in the study (n = 33).

The average number of classroom teachers per high school was 68.24 and the range was a high of 91, and a low of 51 classroom teachers per school. The

average number of students per classroom teacher was 18.59:1 and the range was a high of 23.5:1 and a low of 14.5:1.

Nine schools were considered urban (located in cities over 100,000 in population), eleven were located in suburban communities (located in communities in approximation to and dependent for commerce on the three largest cities in the state: Portland, Eugene, and Salem). Seven schools were located in small cities (ranging in population from 15,000 - 70,000) and seven were located in small towns (under 15,000 population).

It is significant to note that of the 34 schools, 33 indicated they were currently involved in a school improvement effort. The average length of time in a school improvement effort was 3 years. Sixteen schools (47%) participated in the Northwest Regional Educational Laboratory's Onward To Excellence (OTE) School Improvement Program. Fourteen (41%) schools were recipients of Oregon Legislative House Bill 2020 School Improvement Incentive Grants.

Instrumentation

A battery consisting of three different survey instruments totaling 71 questions was provided to teachers. The three instruments were: (1) The School Vision Inventory; (2) Environmental Robustness Semantic Differential; and (3) The Sense of Autonomy Scale.

1. The School Vision Inventory (SVI) was developed by Greenfield, Licata, and Johnson (1989). The instrument consists of 17 true or false items. The instrument assesses the degree to which the principal is able to get others in the school and community to share and work to implement his/her vision of what the school can and ought to be. Prior to completing the items, teachers responded to two statements. The first was: "My principal regularly emphasizes the importance of doing what is right for all children in this school." The second was:

"My principal has a vision of what this school ought to be." Responses were indicated on a true/false scale. A false answer to either of these questions excused the respondent from answering the remaining questions from this instrument.

The SVI consists of three subscales. The first subscale, "Vision Internalization," is composed of four items and measures the degree to which the principal has been effective in getting teachers and others to accept, internalize, or share the vision of what the school should be. Items include: "This vision serves the best interest of all children in this school" and "I share in this vision." The second sub-scale, "Vision Exchanges," is composed of five items which measure whether the principal is effective in exchanging and sharing ideas about achieving the school vision with teachers, students, parents, superiors, and members of the community. Statements include "My principal effectively exchanges ideas with teachers to achieve this vision." The third subscale, "Vision Sacrifice," is composed of five items and measures the success the principal has experienced in motivating himself or herself and others to work beyond the call of duty to achieve this vision. In general, the items of this subscale ask; "Are school participants motivated enough to 'sacrifice' in order to see that this vision is realized?" (Greenfield, Licata, & Johnson, 1989)

Since the school was the unit of study, mean scores were computed for each school. A total vision score was calculated from the means of the three SVI subscales. Alpha reliability coefficients for the individual items, using individual teacher and school mean item scores, were .85 and .87, respectively in a study by Greenfield, Licata, and Johnson (1989).

2. Environmental Robustness Semantic Differential (RSD) was developed by Licata and Willower in 1978. It asks teachers to respond to 10 bi-polar adjectives relating to each of the following three concepts: "My role as a teacher is," "My Principal is," and "My school is:" boring/interesting, fresh/stale, meaningless/

meaningful, important/ unimportant, usual/unusual, powerful/ weak, passive/active, thrilling/ quieting, uneventful/action-packed, challenging/dull (underlined adjectives are robust). Each scale is scored from 1-7 with a total score ranging from 10 to 70 (the higher the score, the more the robustness).

Test reliability has been reported for each adjective pair and the total RSD instrument. For the latter, the Pearson coefficient was .77 and the Spearman coefficient was .78. Concurrent validity of the RSD has been demonstrated for each adjective pair based on their ability to discriminate significantly between two concepts: dramatic and nondramatic (Licata & Willower, 1978).

3. The Sense of Autonomy Scale (SAS) was developed by Charters (1974). This instrument has 24 items scored on a four-point scale ranging from "strongly disagree" (1 point) to "strongly agree" (4 points) with total instrument scores ranging from 24 to 96 to (the higher the score, the greater the perceived sense of autonomy). This instrument assesses teachers' sense of autonomy in terms of external forces which may impact the classroom. Questions from this scale include items such as: "I sense pressure from the administration concerning how I spend my time in class;" "I feel free to try out new teaching ideas with my classes;" "I have little say over how the progress of my students is to be judged;" and "I feel free to say whatever I wish to pupils in the classroom."

Internal reliability of the SAS Scale was .91 and a generalizability coefficient, estimating the separate variance components of persons, items, and occasions, yielded a .76 coefficient with the largest contribution of the error due to the person-by-occasion component (Charters, 1974).

A factor analysis of data collected by administering this instrument yielded six subparts or factors for grouping and interpretation (Licata, Greenfield, & Teddlie, 1989). These are:

(1) freedom to select the techniques of work (Freedom to Select);

(2) freedom from distrust by administrators/colleagues (Freedom from Distrust);

(3) freedom from administrator/colleague influence (Freedom from Influence);

(4) freedom to control pace of student work (Freedom to Control Pace);

(5) freedom from excessive school level organization of instruction (Freedom from Excessive Organization);

(6) freedom in student relationships (Freedom in Student Relationships).

According to Charters (1974, p. 217), a strong or high score on the SAS Scale means that the teacher feels generally free to direct his or her instructional work with students using his or her own personal judgment. While the teacher may solicit ideas and advice from others, he or she feels no obligation to accept the suggestions without weighing their merits. A low sense of autonomy score implies that the teacher feels generally constrained in the teaching job. The constraints may be a result of activities by others, rules and regulations, or other forces or conditions outside the classroom and outside his or her control. The teacher with a low sense of autonomy believes there is little latitude for bringing personal judgment to bear on the job.

SUMMARY OF DESCRIPTIVE STATISTICS AND BETWEEN-SCHOOL VARIANCE

Summary of Instrument Subscales

Teachers were generally positive in their perceptions of the vision of their principal, the robustness of key roles in the organization of the school and their own sense of work autonomy.

Of the vision subscales, Vision Exchange was given the highest mean score of .85. It was followed by Vision Sacrifice at .77 and Vision Internalization at .70.

Vision Internalization had the greatest diversity among schools, with a low school score of .51 and a high score of .90, or a range of .39. On the last question of the vision instrument, 89% of teachers responded positively when asked whether their school was making progress toward accomplishing their vision. It should be noted that this question was different from the other 16 questions on the SVI. It was the only question on the SVI that referred to vision as a shared vision or as "our vision." The other 16 questions all pertained to the vision of the principal.

On the robustness scale, teacher robustness (My Role as a Teacher) was most positive with a mean score of 5.48. Principal robustness (My Principal Is) was the least positive with a mean score of 4.97. Principal robustness also provided the greatest diversity of the robustness sub-scales (standard deviation = .58). This variable had a minimum school score of 3.23 and a high score of 5.81 for a 2.58 range. The range on the principal robustness subscale was 1 point greater than the other robustness subscales. Teacher robustness, on the other hand, had the least variance (standard deviation = .27). Teachers in the study appeared to be more positively biased when judging themselves.

On the autonomy scale, Freedom to Control Pace, Freedom to Select, and Freedom from Distrust were the most positive subscales with mean scores of 3.25, 3.20, and 3.17 respectively on a 4 point scale. Freedom from Excessive Organization was the least positive with a mean score of 2.64. At the school level, Freedom to Select provided the greatest range of individual scores with a minimum mean school score of 2.69 and a maximum of 3.6 or a range of .91.

One of the issues raised by the study was the extent to which the strong positive direction of the vision subscales proved to be a constraining factor in the relationships of the variables. For example, when the Vision Exchange mean is .85 on a 1 point scale there is little room for variance or discrimination between schools. This factor is complicated by a very small standard deviation (.07).

Analysis of Variance Examining Between-School Variance

An analysis of variance (ANOVA) was run to assess the variance between schools related to variance within schools and test the validity of the school level data (See Table I). The entire teacher population of the study by school served as the independent variable while total vision, total robustness, and total autonomy were the dependent variables. All the F-values were statistically significant, indicating greater between school variance relative to within school variance on the key variables. These findings support the school as an appropriate unit of analysis; all three variables demonstrated construct validity as school-level variables.

CORRELATION ANALYSES PERTAINING TO RESEARCH HYPOTHESES

Pearson product moment correlations were run among the three variables: principal vision, environmental robustness, and teacher sense of autonomy. Positive correlations were established among all three of the variables. The strongest correlation was between principal vision and environmental robustness ($r = .61$, $p < .01$). Environmental robustness was positively and significantly correlated with teacher autonomy ($r = .42$, $p < .05$). The weakest correlation, principal vision with teacher autonomy, while positive ($r = .29$), was not statistically significant.

TABLE I

ONE FACTOR ANOVA, ALL TEACHERS BY SCHOOL VS THEORETICAL VARIABLES

SOURCE	DF:	SUM SQUARES:	MEAN SQUARE:	F - RATIO
*1. VISION				
BETWEEN GROUPS	33	4.25	0.13	3.11
WITHIN GROUPS	1021	42.3	0.04	p = .0001
TOTAL	1054	46.55		
*2. ROBUSTNESS				
BETWEEN GROUPS	33	163.59	4.96	8.2
WITHIN GROUPS	1294	737.13	0.6	p = .0001
TOTAL	1327	946.2		
*3. AUTONOMY				
BETWEEN GROUPS	33	26.15	0.7	5.99
WITHIN GROUPS	1300	0.82	0.13	p = .0001
TOTAL	1333	197.97		

*1. Total teacher population by school vs. VISION

*2. Total teacher population by school vs. ROBUSTNESS

*3. Total teacher population by school vs. AUTONOMY

TABLE II

SUMMARY OF CORRELATIONS FOR THREE VARIABLES

	VT	RT	AT
VISION - TOTAL (VT)	1.00	.61**	.29
ROBUSTNESS - TOTAL (RT)		1.00	.42*
AUTONOMY - TOTAL (AT)			1.00

*p = <.05
**p = <.01

Correlations among Demographic and Theoretical Variables

Beyond testing for the three hypotheses, the researcher explored several contextual issues. Correlations were run among the various theoretical variables and demographic variables. Specific concern has been expressed regarding the limitations of studies on the principalship. Specifically, Blumberg and Greenfield (1986) note that "the interdependency or reciprocal character of social relationships, events, and activities is deemphasized and contextual variables are virtually ignored" (p. 234). As a result, it was important to explore the relationships among the theoretical variables as well as several specified demographic variables.

Of particular interest was the size of the student population and its relationship to vision, robustness, and autonomy. In the past several years, there has been significant attack on the belief that "bigger is better." Boyer (1983); Goodlad (1984); Sizer (1984); Levine and Lezotte (1989); and Barth (1990) affirm the notion of creating smaller, more intimate schools where students and staff are more able to experience community than in the large "mega" high schools. When the demographic variable, school enrollment, was run with the theoretical

variables—negative correlations were established when enrollment was correlated with principal vision (r = -.1), Vision Exchange (r = -.12), Freedom to Control the Pace (r = -.26), Freedom from Excessive Organization (r = -.19), and Freedom in Student Relationships (r = -.11). The implication from this data is that the larger the school, the less teachers may feel a sense of control over their work environment. The larger the school, the more likely they feel the organization and bureaucracy controls them.

Another factor regarding the size of a school's student body relates to the student-teacher ratio. Not surprisingly, the higher the student-teacher ratio, the more negatively teachers felt about their own sense of autonomy (r = -.23). The student-teacher ratio was most negatively correlated with Freedom to Control the Pace (r = -.36, $p < .05$), and Freedom from Excessive Organization at (r = -.32). Teachers in schools with higher student-teacher ratios also had a more negative perception of their principal's robustness (r = -.21). This finding would lend some credence to describing leadership effectiveness within a contextual framework. If, for example, teachers are feeling more frustrated or inhibited by the size of their classes or their over all student load, they may be less likely to recognize or validate the meaningful, active, and important roles played by their principals.

The socio-economic variable used in the study was the percentage of students eligible for free or reduced lunches at each school. The federal guidelines for the lunch program defined the criteria for eligibility. No correlations were established.

One of the questions raised in the study was whether the perceptions of teachers would vary from rural environment to small city to urban center. One-Way Analyses of Variance (ANOVA) were employed with the community types (small town, small city, suburban, and urban) as the independent variables and

each of the three theoretical variables as the dependent variable. None of the F-values from the ANOVAS were statistically significance.

There were no correlations of statistical significance established between the theoretical variables and the principal's years of experience.

Those schools involved in Onward To Excellence (OTE), the research based school improvement process developed by and implemented through Northwest Regional Laboratory, exhibited a non-significant positive correlation with vision and robustness and a negative correlation with autonomy. When schools not involved in OTE were coded as (0) and those not involved coded as (1), total autonomy was correlated with OTE at ($r = -.23$). While not statistically significant, it does indicate a trend. While this program calls for teacher/administrator leadership teams to plan and implement change, no additional resources are provided. This result suggests that as teachers become involved in school wide improvement efforts, they perceive they give up some of their control and autonomy in the classroom.

Fourteen participating schools were involved in the state of Oregon's "2020 School Improvement and Professional Development Program." This legislatively initiated program currently gives 97 elementary and secondary schools in the state funding to develop school improvement plans initiated and administered by teacher led site committees. When schools not designated as "2020" schools were coded as (0) and "2020" schools designated as (1), "2020" schools had a slightly positive correlation with total vision ($r = .22$) and total autonomy ($r = .19$). Participating "2020" schools were correlated more strongly with principal robustness ($r = .33$), school robustness ($r = .40$, $p < .05$), and total robustness ($r = .37$, $p < .05$). While there are no financial incentives with the OTE process, each "2020" school receives the equivalent of $1,000 per teacher, from the state of Oregon, to be spent over the span of 1-2 years by the school on improvement efforts. By

virtue of the state statute implementing "2020" programs in schools, teachers have responsibility for participating in the development of the budget for "2020" implementation and the disbursement of funds. The legislative intent of "2020" was to create an environment for teacher empowerment as well as a climate for substantive change at the school level. Grant recipients are encouraged to be innovative, take risks, challenge traditional assumptions and structures related to schooling, and expand new frontiers of school improvement. While the program, now three years old, is still in its formative stage, it has created a sense of excitement and drama for those participating schools. Early studies indicate a greater sense of visionary leadership and collaboration in the governance and direction of participating schools (Goldman, Dunlap, & Conley, 1991). Not surprisingly, teachers in "2020" schools perceive a greater sense of the vision of their principal, their own autonomy and a climate of robustness at their school.

Interviews with Principals

Following an initial analysis of the data, eight principals from participating schools were interviewed. These principals were deemed to be representative of the participants in the study. Individual school mean scores from the three scales were rank ordered from 1 to 33. From that ranking, two principals representing schools in each quartile were selected to be interviewed. They were not informed of their school scores or rankings. Open ended questions, including a set developed by LeSourd and Grady (1990) for their study of "Visionary Attributes in Principals' Descriptions of Their Leadership," were used. Principals were asked to reflect on aspects of their leadership role including: principal responsibilities, decision making processes, influence, expectations, qualities that make for a good principal, and their vision for their school.

Clearly, those interviewed had given significant thought to their principal role. They were all able to articulate that role and and how they went about accomplishing it. They spoke with care and feeling for the students in their school. They also spoke without hesitation regarding their vision for their school. There were, however, two contrasting responses to the questions which support the statistical findings of this study. One related to leadership and the other to control and decision making.

Those principals from schools which scored highest on the survey instruments were more expansive in describing the impact of their leadership role and vision on their school. They spoke more metaphorically and presented themselves as idea people, intentional philosophers, and risk takers. They thrived on learning as a driving force in their school and described themselves in terms such as "head learners," "passionate learners," and "at the peak of my learning curve." Modeling their own learning was a critical component of their leadership style. Like Barth (1990), they portrayed their school as a place where everyone ought to be engaged simultaneously in experiencing the joy, satisfaction, and pain of learning. They were particularly impatient when teachers did not hold the same values for their own learning. They saw themselves as cheerleaders and sparkled when talking of their vision. They talked of nurturing those teachers committed to sharing their vision, getting those on board who might be ambivalent to it, and neutralizing those who might object to it or scuttle it.

Those principals from schools scoring lower on the survey instruments talked more about chain of command and lines of authority. They tended to be more comfortable talking about concrete management oriented aspects of school administration. They talked of seeking input and building consensus through traditional leadership roles such as the administrative team and department

coordinators. They were definitive, however, in describing their role as final arbiter and decision maker in their school.

Principals from schools scoring higher on the survey instruments, on the other hand, tended to blur the leadership and authority distinctions. They talked with ambivalence regarding how decisions were made in their school. They acknowledged that participative decision making processes were critical to their vision for the school and described these processes as very fluid and ambiguous. They expressed keen satisfaction when key decisions were made with involvement and accountability across administrative, department leader, teacher, clerical and even student lines. They expressed impatience when decisions seemed protracted or bogged down, and were particularly frustrated when the bureaucracy got in the way. They tended to talk more openly and animated about conflict and tensions in their school as inherent to effective decision making in the change process.

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Conclusion # 1: Teachers' perceptions of their principal's effectiveness in advancing a school vision is positively correlated with their perceptions of a robust school climate.

A positive relationship between vision and robustness was validated in virtually all of the subscales. Vision Internalization ($r = .46$, $p < .01$), Vision Exchange ($r = .58$, $p < .01$), and Vision Sacrifice ($r = .66$, $p < .01$) strongly correlated with principal robustness (See Table III). In fact, principal robustness' correlation with total vision ($r = .63$, $p < .01$) was the strongest correlation of any subscale with a variable. This finding indicates that principals who create robust schools may be more successful in getting teachers to accept, internalize, and

TABLE III

SUMMARY OF RESPONDENT TOTALS FOR THREE VARIABLES BY SCHOOL

SCHOOL	RESPONSE	TEACHER POPULATION	% TEACHER RESPONSE	VISION	ROBUSTNESS	AUTONOMY
1	26	59	0.44	0.91	5.37	3.15
2	49	55	0.89	0.86	5.38	3.09
3	28	62	0.45	0.87	5.12	3.07
4	32	55	0.58	0.69	4.27	2.90
5	29	69	0.42	0.70	5.01	2.80
6	25	56	0.45	0.79	5.43	3.26
7	35	59	0.59	0.89	5.34	3.16
8	48	55	0.87	0.65	4.79	2.97
9	36	66	0.55	0.68	4.35	3.07
10	47	65	0.72	0.78	4.77	2.99
11	50	71	0.70	0.75	5.16	2.82
12	57	64	0.89	0.84	5.45	2.93
13	61	68	0.90	0.81	5.13	2.95
14	37	69	0.54	0.79	5.35	3.05
15	9	62	0.15	0.88	5.99	3.22
16	44	85	0.52	0.78	5.53	3.10
17	22	58	0.38	0.87	5.26	3.08
18	28	65	0.43	0.66	5.16	3.25
19	29	82	0.35	0.78	5.76	3.07
20	58	80	0.73	0.82	5.30	2.96
21	29	86	0.34	0.74	4.96	3.06
22	38	86	0.44	0.81	5.08	3.24
23	36	67	0.54	0.86	5.67	3.31
24	34	85	0.40	0.72	4.88	3.19
25	58	83	0.70	0.83	5.65	3.15
25	45	70	0.64	0.81	5.48	3.18
27	47	73	0.64	0.70	4.99	2.92
28	42	70	0.60	0.71	5.15	3.26
29	71	91	0.78	0.78	4.86	2.84
30	32	51	0.63	0.75	5.29	2.87
31	22	56	0.39	0.82	5.35	3.04
32	35	53	0.66	0.69	4.91	2.97
33	27	64	0.42	0.78	5.59	3.12
34	72	80	0.90	0.73	4.65	2.86
MEAN	39	68	0.58	0.78	5.19	3.06
VARIANCE				0.01	0.14	0.04
STAND DEV				0.07	0.37	0.20
TOTALS	1338	2320				

TABLE IV

CORRELATION MATRIX FOR THEORETICAL VARIABLES

	VI	VE	VS	VT	TR	PR	SR	RT	FS	FD	FI	FP	FO	FR	AT
VISION INTERNALIZATION	1.00														
VISION EXCHANGE	.51**	1.00													
VISION SACRIFICE	.79**	.67**	1.00												
VISION - TOTAL	.89**	.80**	.94**	1.00											
TEACHER ROBUSTNESS	.13	.50**	.32*	.33*	1.00										
PRINCIPAL ROBUSTNESS	.46**	.58**	.66**	.63**	.45**	1.00									
SCHOOL ROBUSTNESS	.36*	.47**	.51**	.49**	.67**	.62**	1.00								
ROBUSTNESS - TOTAL	.42**	.62**	.63**	.61**	.75**	.89**	.88**	1.00							
FREEDOM TO SELECT	.02	.43**	.24	.24	.62**	.38*	.36*	.50**	1.00						
FREE FROM DISTRUST	.15	.47**	.27	.31*	.30*	.44**	.24	.41**	.66**	1.00					
FREE FROM INFLUENCE	.07	.42**	.21	.23	.32*	.36*	.18	.35*	.68**	.90**	1.00				
FREE TO CONTROL PACE	-.08	.35*	.21	.16	.09	.37*	-.02	.23	.52**	.62**	.63**	1.00			
FREE FROM EXCESS ORGAN	.18	.22	.33*	.27	.06	.26	.20	.23	.48**	.59**	.65**	.58**	1.00		
FREE IN STU RELATIONSHIPS	.01	.43**	.23	.23	.38*	.44**	.24	.43**	.77**	.79**	.78**	.74**	.49**	1.00	
AUTONOMY - TOTAL	.07	.46**	.30*	.29*	.35*	.45**	.24	.42**	.82**	.90**	.92**	.81**	.74**	.89**	1.00

* P = < .05
** P = < .01

VI = VISION INTERNALIZATION
VE = VISION EXCHANGE
VS = VISION SACRIFICE
VT = VISION TOTAL
TR = TEACHER ROBUSTNESS
PR = PRINCIPAL ROBUSTNESS
SR = SCHOOL ROBUSTNESS
RT = ROBUSTNESS TOTAL
FS = FREEDOM TO SELECT
FD = FREEDOM FROM DISTRUST
FI = FREEDOM FROM INFLUENCE
FP = FREEDOM TO CONTROL PACE
FO = FREEDOM FROM EXCESSIVE ORGANIZATION
FR = FREEDOM IN STUDENT RELATIONSHIPS
AT = AUTONOMY TOTAL

share the vision of what the school should be, exchange and share ideas about that vision, and actually sacrifice for that vision.

The correlation between Vision Internalization and environmental robustness was positive ($r = .42$, $p < .05$) although not as strong as the correlation of environmental robustness with Vision Exchange and Vision Sacrifice. Of the vision and robustness subscales, the weakest relationship was between teacher robustness and Vision Internalization ($r = .13$). This suggests that teachers who don't see or accept their role as being as "meaningful" or "important" probably have difficulty in accepting, internalizing, or sharing the significance of a vision of what that school should be.

The relationship between vision and robustness has been clearly established. Based upon an analysis of the data, it could be inferred that in a robust school, two of the more significant indices are the robustness of the principal and his or her ability to enable teachers to be motivated enough to sacrifice in order that the vision might be realized. The robust school is one which is perceived as "interesting," "fresh," "unusual," "active," "powerful," and "challenging." Certainly these qualities are all important in moving teachers beyond their own provincialism and outside the four walls of their classroom. As implied in the study, the vision of the principal goes far beyond any personal goals or narrow perspective on schooling. It is a vision of what the school ought to be and is embedded in the importance of doing what is right for all children in the school. Sacrificing for that vision means a commitment to taking action to achieve that vision. It means broadening one's horizons to the greater good of the school and its community. It may even mean, as James Baldwin (1961) so powerfully shares in Nobody Knows My Name, that one is able "without bitterness or self pity, to surrender a dream he has long cherished or a privilege he has long possessed, that he is set free - that he has set himself free--for higher

dreams, for greater privileges" (p. 117). To bring staff to a point of sacrifice, the principal must be able to effectively exchange ideas with staff and facilitate the internalization of that vision. There is a spiritual quality in all of this for it means creating a community where openness and trust are valued and practiced. It also means encouraging the taking of risks and the willingness to experience failure. It really means creating a climate where appropriate sacrifice ultimately reaps rewards that far outweigh the pain involved (Peck, 1985).

Based on supplementary interview data, those principals viewed by their teachers as being more visionary, saw themselves as idea people who were in tune with the research, continually analyzing and examining every aspect of school life, and unrepentant in asking "why." As one principal described it:

> Knowledge is power and nobody reads as much as I do and that reading and searching the literature provides a massive amount of influence. Through it I am able to engage others to much more actively pursue their craft knowledge. Increasing the professionalization of this staff requires raising the eloquence of our dialogue through reading and providing opportunities to share information.

Principals interviewed, whether their schools scored higher or lower on the variable scales, had little difficulty articulating a vision for their school. When asked to describe his vision for his school, one principal said:

> My number one job is to make people successful. To do that I build on the notion that people need to work together. My vision for the high school is to build community while encouraging people to take risks

Another prefaced his vision with the Cheshire cat's admonition to Alice in Through the Looking Glass. "If you don't know where you're going, any road will get you there." He articulated his vision as follows:

> The premise for my vision is innovation, integration, and collaboration. I believe that failure is a good thing; in fact, it is the best form of staff development. People must be allowed to fail. Risk taking and experimenting must be encouraged and supported.

Another was more intentional in describing his vision of preparing students for the workplaces of the future:

> My vision is to speak to the student in the workplace. I'm committed to critical inquiry and flexibility which are essential to restructuring. I also want to spread my vision through peer inquiry teams. My vision includes communicating and packaging what's going on at my school.

Another principal discussed vision in terms of having ownership by the participants whether they be staff, students, or community. His vision is driven by technology:

> My vision is dynamic. It is creating a desire to see the future knowing that there is never a fixed point in the future. It is measured not in what we are doing but in what we are producing. Part of my vision is in teaching people to let go of what is, and to create a paradigm shift.

Those principals interviewed, who were able to most clearly articulate their role, saw one of their key purposes as keeping their school focused on the mission and goals. This was done through keeping staff informed, asking the right questions, and setting up people for success. They worried, however, that their passion and almost obsessive challenging of the status quo would be seen by teachers, as one principal fretted, "as brow beating them into submission to share my vision for the school. Sometimes I wonder if I just keep talking about it, they will eventually see the light." They leveraged the support of anyone willing to participate in moving the school in the direction they felt it needed to go. They used metaphors such as "dive bomb" to describe how they move in on teachers who, although perhaps reticent to participate in change, show some glimmer of willingness to get on board. Clearly these principals were neither passive bystanders nor "talk show hosts." They moved beyond the exchange of ideas and into the realm of action. They were determined not to be manipulated by the situation they were in or by other players. These same principals were seen by their teachers as more robust. They understood the complexity of their schools but also described them as "extremely exciting places, full of inventiveness and pioneering." Restructuring and change were the words for the day.

Like Vaill (1989), they were leaders who appeared to have little tolerance for organizational jargon such as "role model," "participative leader," "facilitator," "manager." Instead their metaphors and images of leadership might be more appropriately placed in context of "voyager," "knight," "quarterback," "chaplain," "minister," "father," "mother," or "servant."

Conclusion # 2: There is a positive relationship between teachers' perceptions of their principal's effectiveness in advancing a school vision and their sense of autonomy.

The correlation between vision and autonomy was the weakest of the correlations among the three main variables ($r = .29$). There are, however, several significant relationships which can be addressed. Vision Exchange correlated positively with autonomy ($r = .46$, $p < .01$). Vision Sacrifice demonstrated a positive relationship with autonomy ($r = .30$) while Vision Internalization had virtually no correlation with autonomy ($r = .07$).

Of the three vision subscales, Vision Exchange had the strongest relationship with the autonomy subscales. It correlated significantly with five of the six autonomy subscales. Vision Sacrifice and Vision Internalization did not correlate with any of the autonomy subscales.

Vision Exchange is the only vision subscale which calls for no commitment from the teachers. Vision Internalization requires teachers to accept and share in the vision. Vision Sacrifice requires teachers to take action and go beyond the call of duty in order to see that the vision is realized. Vision Exchange, on the other hand, measures the perceived success the principal has experienced in exchanging and sharing ideas with teachers, students, parents, superiors, and the community, in order to achieve the vision. The concept of Vision Exchange is embedded in a public process of interaction and critical analysis of a vision. It

refers to the principal's effectiveness in exchanging rather than imposing ideas on virtually all clients of the greater school community. Theoretically, it is from that exchange that the vision is actually achieved.

It is much safer for teachers to observe, appreciate and value the principal's ability to exchange ideas and interact with them in a public manner than to actually take action on those ideas. As teachers perceive they are going to be affected by a vision, they may be less likely to incorporate that vision, particularly if it means giving up their sense of autonomy.

If teachers are to have a sense of autonomy and empowerment in their roles, the mere exchange of ideas with their principal regarding a vision for their school may not be sufficient. Teachers would have to act on that vision, and action implies commitment. Traditional views of teacher autonomy as synonymous with teacher power, discretion, independence, and isolation would no longer seem to be appropriate. Autonomy, as described in this study, may mean giving up some independence and control to act for a "greater good" and a common commitment to students. That "greater good" can be defined by the vision for the school. Ironically, then, internalization of the vision, and ultimately sacrifice for it could lead to greater autonomy. Thus a paradox emerges in the relationship of vision and autonomy. If autonomy is embedded in the concept of empowerment and professionalization of staff, perhaps the teacher has to be willing, of his of her own volition, to freely share in and sacrifice for that vision to truly gain autonomy.

Those principals interviewed who were perceived by teachers as more effective in setting forth a vision, thriving in a robust environment, and supporting teacher autonomy saw their jobs as "building coalitions of leaders among teachers so that everything doesn't have to come from the command central post of the principalship." They were committed to collaborating with

teachers on significant decision making models. They described their role as both mediator and shield in protecting school wide decision making from district interference. They talked about themselves as "data disseminators," "boundary pushers," "consensus builders," "turf breakers," and "community makers." As with creating a school vision, the process involving decision making was as fundamental to the health of the school as the actual decisions themselves. As one principal described his role, "I'm into less input and more innovation and collaborative decision making."

Principals interviewed from schools where vision, environmental robustness, and teacher sense of autonomy were not perceived as positively affirmed cooperative decision making in their schools but they restricted the parameters for staff decision making. They described their own roles as "bottom liners." They used phrases such as "The buck ultimately stops with me," "I'm the one the superintendent holds accountable" and "final decisions rest with me" in describing how decisions are made at their schools.

One of the principals interviewed offered grading practices as an indicator of the conflict between principal vision and teacher sense of autonomy. When he came to the school he discovered a high failure rate for students. He articulated his belief that the staff must be committed to the success of all students. However, when he tried to inculcate his staff with this belief they resisted, accusing him of interfering with their academic freedom. His experience parallels findings from other studies regarding perceived administrative interference with teacher zones of influence (Lortie, 1975; McLaughlin et al., 1986; Nyberg & Farber, 1986; Porter 1989; Powell et al., 1985; Shedd & Bacharach, 1991: Vidich & McReynolds, 1971).

Clearly, the relationship between vision and autonomy is the most perplexing and paradoxical of the three sets of variables. It is the most likely to create conflict. If a vision is imposed on teachers, the likelihood of its acceptance

is greatly diminished. The process of creating a shared vision is not without potential for tension and conflict. Roles and relationships become, by their very nature, more ambiguous and ambiguity breeds discomfort. Principals who are effective in creating a shared vision while sustaining a climate of teacher autonomy do indeed operate in a state of painful tension as they seek to balance the competing demands of these variables. It may be at this point that the variable of robustness is particularly significant.

As with the study by Licata, Greenfield, and Teddlie (1989), the findings of this study could support the notion that whoever initially creates the vision may be less important than the extent to which the staff actually supports the vision. High school principals who view relationships between themselves and their teachers as static and autocratic will have little success, over the long haul, in getting teachers to support, work for, and sacrifice for a common vision. Further, "public and critical analysis of a vision in terms of what is morally appropriate and what is achievable may be our best defense against misguided or unscrupulous leadership" (p. 16).

Principals who are able to move their schools positively toward doing what is right for all children in their school must be willing to accomplish this vision through others. Formal relationships with teachers as a collective group with collective power must be reconsidered. Schools can no longer be institutions of fossilized power (i.e. teacher union, or informal teacher power brokering). The principal with a shared vision for the school must have the support and involvement of the teachers, students, community, and the school district. Thus, school districts need to consider giving local schools greater freedom and flexibility in decision making to enhance a climate and culture of mutual collaboration. Perhaps the lower correlation ($r = .29$) on the second hypothesis suggests the fragile nature of the authority relationship between principals and

teachers. It also suggests the importance of a transformational type of leadership reflected in principal responsiveness to teacher values, needs, and interests as the basis for an authority relationship resulting in voluntary compliance (acceptance) by teachers of the principal's vision.

Given the norms of the occupation, the relationship between vision and autonomy may be a key indicator of how the principal breaks into the teacher's sphere. He or she may accomplish this by drawing connections between teachers' needs and priorities and a vision espoused for the school.

Conclusion # 3: There is a significant positive relationship between teachers' sense of autonomy and their perceptions of a robust school climate.

The relationship between autonomy and robustness was significant ($r = .42$, $p < .05$). The strongest subscale correlations with autonomy were principal robustness ($r = .45$, $p < .01$) and teacher robustness ($r = .35$, $p < .05$). Furthermore, principal robustness correlated significantly with five of the six autonomy subscales and teacher robustness correlated with four.

Four of the autonomy subscales correlated significantly with total robustness. The strongest was Freedom to Select ($r = .50$, $p < .01$), followed by Freedom in Student Relationships ($r = .43$, $p < .05$), Freedom from Distrust ($r = .41$, $p < .05$), and Freedom from Influence ($r = .35$, $p < .05$).

The strongest correlation among the robustness and autonomy sub-scales was between teacher robustness and Freedom to Select ($r = .62$, $p < .01$). Teachers who saw their roles as "important", "powerful", and "challenging", felt much more positively about their ability to select the techniques of their work. Teachers who saw their role as robust also felt greater freedom in student relationships ($r = .38$, $p < .05$).

When principal robustness was perceived positively, teachers felt greater freedom from distrust ($r = .44$, $p < .01$), more freedom in student relationships ($r = .44$, $p < .01$), more freedom to select ($r = .38$, $p < .05$), more freedom to control the pace of student work ($r = .37$, $p < .05$), and more freedom from influence ($r = .36$, $p < .05$). When teachers believed their principal was robust, they appeared to exhibit greater ownership and autonomy in their roles.

Principals interviewed who were perceived as more robust described a variety of avenues for getting teachers to participate in and accept ownership for their schools. One described it in terms of "getting more teachers playing." He talked of actively pushing staff to be involved with every aspect of the school even though, he recognized, some staff were not comfortable with that style. Another talked of reducing cynics and cynicism within the staff. Principals interviewed saw themselves as challenging staff to know the research and examine everything critically. They described their commitment to making staff more accountable while creating an environment where everyone is a researcher and ideas and data are freely and openly shared. They also portrayed a climate where risk-taking was rewarded rather than punished and emphasis was given to "why innovations and ideas by teachers will work rather than all the reasons why they won't."

In the Street (1988) study of 57 elementary schools in Louisiana, robustness and autonomy were not highly correlated ($r = .18$) versus ($r = .42$, $p < .05$) in this study. Although the correlations between autonomy and the various robustness subscales resulted in a positive direction in the Street study, none were statistically significant. One possible reason the high school sample was not only statistically significant but also much stronger than the elementary sample might be that high school teachers, by the very nature of their work, expect greater autonomy and less supervision than their elementary counterparts. High school

teachers pride themselves in their independence and discretion over instruction and curriculum issues. While it is common for an elementary school to embrace a uniform teaching or discipline model, such cohesion at the high school is rare.

Further, high schools might be perceived as organizations where robustness is more evident than in elementary schools. It could be argued, for example, that high schools, with activities such as drama, athletics, music, student government, a smorgasbord of classes, and a clearly accepted role in the community, are more likely to encourage the metaphor used to describe robustness, "school as interactive theater" (Licata & Johnson, 1989, p. 18).

It also may simply be that the RSD is not as good a measure of climate at the elementary level. Metaphorically, a temperature gauge which assesses hot and cold weather is accurate for certain weather conditions but is not adequate for other aspects of climate such as humidity, wind speed, or cloudiness. Perhaps the RSD, like the temperature gauge, is a more suitable "fit" for certain climate aspects in the high school which may not be as relevant in elementary schools.

Another reason for the discrepancy between elementary and high schools might be more a factor of the environment and economics. The elementary sample was from three rural districts in Southern Louisiana. The high schools in Oregon, on the whole, represent a more affluent middle class environment.

Further Implications

Initially, this study viewed the vision of the principal as the catalyst for leadership in the high school. However, based on the findings of the study, robustness may, in fact, play an essential role. Robustness implies less routinization, repetition, and monotony in the school structure. Principals who understand the importance of environmental robustness for themselves, their teachers, and their schools, may choose to not be inundated with the daily minutia

of school business. They are less likely to insist on uniformity or prescribed ways of doing things. They would also appear to be more capable to cope with the "white water" of a world in turbulence and chaotic change. As a result, they are more likely to encourage teacher freedom to: select the techniques of their work, control the pace of student work, and have greater freedom in and responsibility for student relationships. In so doing, they may create an environment of trust and caring where teachers feel free from undo pressure or influence.

As a school climate variable, it would seem that school robustness can positively influence principal and teacher robustness and vice versa. To better understand how the robustness subscales impact and influence one another, it would be helpful to further clarify the relationships within this variable. In creating a climate for robustness, a principal can establish an environment where teachers are engaged in the joy and pain of learning and participating in a vibrant community. In such a community, teachers may feel more empowered to positively influence their own world and the life of the school.

While robust schools are not necessarily effective ones, schools characterized by robustness, legitimate professional leadership, and goal direction are clearly the most promising in terms of desired student outcomes (Licata & Johnson, 1989). A robust principal is more likely to develop a shared vision with various members of the school community. Schools would do well to consider principal robustness as a major characteristic in the hiring process. Yet, as one principal cautioned:

> If you're looking for a robust principal without considering vision, you're looking at an outdated model. The effective principal concept has changed in the past ten years. The expectation that the principal needs to be all things to all people no longer works. Regardless of how vocal, or inspirational, or robust the principal, it is only when teachers become involved in the leadership of the school and see the school differently that the school starts to move.

The leadership of the high school principal is more than visions and ideas, robustness and climate, or autonomy and independence, as important as each might be. It is more than surveys and quantifiable data. The correlations discussed in this paper are more than statistics and numbers. They describe relationships among not only variables but more importantly, among people. Ultimately, as Peter Vaill (1989) portrays leadership, it is all about people. There is nothing a leader can do that does not depend for its effectiveness on the meaning that other people attach to it. Leadership, then, is making and interpreting meaning, it is building and sustaining community. It is caring for and feeding the members of the community. It is building trust while encouraging the taking of risks. Vaill adds to this description the notion of leader as robust steward who values faith in the human prospect over the objectives and techniques of a particular program or course of action. His credo "helping men and women live and work purposefully and decently in the midst of seeming paradox and contradiction" (p. 212) would serve just as well for the high school principal. It is within this context that the interdependence of the three variables comes more clearly into view.

Just as this study has implications for principals in high schools, it also has implications for district officials in hiring principals and enhancing their growth and success as they do the work of the principalship. When hiring a new high school principal both the vision and autonomy variables might be considered as defining and embellishing qualities of robustness. Districts would do well to consider candidates who are able to focus on "the big picture" and are less likely to major in minors. Successful candidates should be able to thrive in an environment which gives strong adherence to a few broad guiding values and allows considerable discretion and autonomy in daily operations. They also should be individuals who: can articulate a clear sense of direction and vision; are

friendly and supportive in relationships; provide active and visible leadership; create a climate of openness in communications; establish positive supervisory relationships with opportunities for personal and professional growth; relate well to students and are committed to their involvement in the life of the school; model learning and leading; and welcome diversity of ideas, and positions.

While those interviewed affirmed these characteristics, they also described some additional qualities they would look for in a successful high school principal. Their responses include:

* Someone who has a real sense of the world and world view
* Someone who reads the right kind of stuff
* Someone with the knowledge of how to create a vision
* Someone who has the ability to focus the staff and focus him/her self
* Someone who is research oriented, both in terms of knowledge and application
* Someone who models learning as well as leading
* Someone who is a people grower, who can make others stronger and bring out the best in them
* Someone with a lot of juggling skills who can balance agendas at once
* Someone who loves kids and wants to make the schools best for them
* Someone who can ask the right questions
* Someone who is not intimidated by change and is a risk taker

These qualities, while not inclusive, certainly embrace the variables studied in this project. If hope is defined as "waiting with anticipation for something we do not possess," these qualities offer us a sense of hopefulness in finding or creating high caliber high school principals for a new millennium.

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